

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

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1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE November 1994	3. REPORT TYPE AND DATES COVERED Final 1-11-94 through 10-31-95
4. TITLE AND SUBTITLE 1994 Annual Teacher Workshop, National Conference November 7-13, "Human Biology"			5. FUNDING NUMBERS GRANT N00014-95-1-0168
6. AUTHOR(S) Ms. Cathy Abeita, Project Director			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) American Indian Science & Engineering Society 1630 30th Street, Suite 301 Boulder, CO 80301-1014 (303) 939-0023			8. PERFORMING ORGANIZATION REPORT NUMBER none assigned
9. SPONSORING MONITORING AGENCY NAME(S) AND ADDRESS(ES) Department of the Navy Office of Naval Research/Resident Rep, University of New Mexico Bandelier Hall West Albuquerque, NM 87131 (505) 277-3852			10. SPONSORING MONITORING AGENCY REPORT NUMBER not known
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Report is available to the public upon request.			12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words) The 30-hour teacher training workshop focused on culture-based, interactive human biology sciences instruction. The goals of the 1994 Annual Conference teacher program were to enable participating teachers to: 1) understand basic human anatomy and physiology content. 2) understand appropriate teaching methodology for American Indian students. 3) engage in classroom activities that focus on human anatomy and physiology which can be transferred and applied to their own classrooms.			

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14. SUBJECT TERMS American Indian, human biology, anatomy, physiology, sciences, instruction, teachers			15. NUMBER OF PAGES 8
			16. PRICE CODE -0-
17. SECURITY CLASSIFICATION OF REPORT unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT unclassified	20. LIMITATION OF ABSTRACT none

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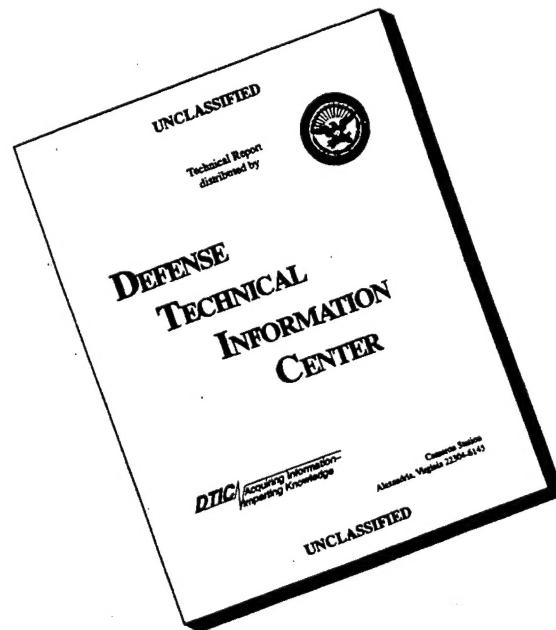
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**1994 ANNUAL TEACHER WORKSHOP, NATIONAL CONFERENCE
NOVEMBER 7 - 13, "HUMAN BIOLOGY"**

FINAL REPORT

I. PROGRAM GOALS

A. Workshop outcomes for the annual teacher workshop at the AISES National Conference were:

1. Teachers experienced appropriate interactive teaching strategies while learning specific life sciences content material relevant to middle grade level classes. Research has shown that teachers who are exposed to constructivist and student-centered methodology are better able to understand and incorporate it into their classrooms.
2. Teachers were reinvigorated and motivated by the workshop activities themselves but especially so because they occurred in the context of the AISES National Conference.
3. Teachers began networking with their counterparts as well as with American Indian scientists, engineers and educators. This networking helps ameliorate the geographic isolation of many American Indian schools. Teachers were able to see many of the opportunities available to their successful students in the career fair and technology expo. They received information on many other AISES precollege and teacher oriented activities. They gained access to AISESnet.

See attached workshop agenda.

II. CRITERIA FOR ACCEPTANCE/SELECTION TO PROGRAM

A. Selection was based on the following:

1. Completed application form submitted by deadline
2. Attached narrative which included responses to:
 - a. why you want to attend the workshop
 - b. how it will strengthen you as a teacher (or related education profession)
 - c. meet your school's curriculum needs
 - d. future teaching plans/professional goals
 - e. specialized area(s) of competency
3. Letter of support from school administrator

B. Did the above criteria for acceptance into the workshop provide for participants who actively participated, shared his/her own experiences and expertise and demonstrated interest in the intended outcomes?

Teachers selected for the 1994 workshop actively participated and shared from their own rich classrooms experiences and expertise. Each demonstrated a clear interest and understanding of the intended outcomes of this experience.

- C. Any recommended additional criteria or changes?
- No recommended criteria or changes at present.

III. STRENGTHS AND WEAKNESSES

A. Specify the strength and weaknesses of the teacher workshop. How would you capitalize on the strengths and work to eliminate any weaknesses for next year's program? Please be specific.

Program Strengths were:

- * Inquiry learning, hands-on and cooperative learning and effective modeling of teaching strategies by workshop staff.
- * Addressing Native American traditions in order to help students connect with scientific learning.
- * Opportunity to visit local schools and participate in academic field trips.
- * Exchanging ideas and networking with colleagues.
- * Human biology content-research projects developed using scientific method/poster presentations.
- * Diversity of workshop group and sharing of own expertise within the classroom

Program Weaknesses were:

- * It is always a challenge to plan a workshop at a hotel. At times some of the logistical needs present a problem, such as no access to sinks/water, etc. A recommendation is to continue visits to local schools in order to visit classrooms and gain additional teaching ideas.

Attached is an article that appeared in the Education Newsletter regarding the teacher workshop.

Please Note: There were no expenditures for equipment.

**AISES NATIONAL CONFERENCE
"HUMAN BIOLOGY" FOR TEACHERS GRADES 4 - 9
NOVEMBER 7 - 13, 1994, SAN JOSE HILTON AND TOWERS
WORKSHOP AGENDA**

MONDAY, NOVEMBER 7

2:00-3:00 pm	Teacher Registration - Plaza
3:00-4:00 pm	Welcome, Traditional Opening, Overview of workshop - San Carlos
4:00-5:30 pm	Workshop Session, Introduction - San Carlos
6:00-7:00 pm	Dinner - Santa Clara
7:00-9:30 pm	Workshop Session, Pre-laboratory activities, Cooperative Group Projects - Plaza

TUESDAY, NOVEMBER 8

7:00-8:00 am	Continental Breakfast - Santa Clara
8:00-9:15 am	Workshop Session/Laboratory - Plaza
9:30-12:00 pm	Workshop Session, Hands-on Biology - Plaza
12:00-1:00 pm	Lunch - Santa Clara
1:00-5:45 pm	Workshop Session, Hands-on Biology - San Carlos/Plaza
6:00-7:00 pm	Dinner - Santa Clara
7:00-8:30 pm	Speaker: Trish Stoddart, Santa Cruz, "The Private Universe: Our Preconception" - San Carlos

WEDNESDAY, NOVEMBER 9

7:00-8:00 am	Continental Breakfast - Santa Clara
8:00 am	Meet in lobby of hotel promptly to leave for local classrooms
8:00 am	Leave for local school site visit
1:00-2:00 pm	Lunch - Santa Clara
2:00-6:00 pm	Workshop Session/Laboratory, Introduction to Marine Biology - Plaza Speaker: Karen Reynolds, Ph.D., San Jose State University
6:30-7:30 pm	Dinner - Santa Clara
7:30-9:00 pm	Work on cooperative learning group assignments - Plaza Room

THURSDAY, NOVEMBER 10

7:00-8:00 am	Continental Breakfast - Santa Clara
8:00 am	Meet in lobby of hotel promptly to leave for Monterey
8:00-3:30 pm	Field Trip - Monterey/Aquarium Facilitator: Scottie Henderson, University of Washington
4:00-6:00 pm	Opening Ceremony of AISES Conference - Convention Center
6:00-8:00 pm	Reception - Convention Center
8:30-10:30 pm	To Be Announced

FRIDAY, NOVEMBER 11

6:30-8:00 am	Continental Breakfast	Convention Center
8:00-9:00 am	Concurrent Sessions	
	*SACAI	Convention Center Room C1
	*NSF Grant Writing for Teachers	Convention Center Room L
9:15-11:30 am	AISES PreCollege Affiliates/Elementary, Middle, High School Chapter Advisors Meeting, San Jose Hilton - San Carlos Room	
	You will have an opportunity to share ideas, network, and hear success stories about how to motivate students in science/mathematics and ensure matriculation.	
9:15-10:15 am	Concurrent Sessions	
	*SACAI	Convention Center Room C1
	*Developing Effective Mathematics/Science Based Programs and Curriculums for American Indian Communities	Convention Center Room L
10:30-11:30 am	Concurrent Sessions	
	*SACAI	Convention Center Room C1
	*Electronic Pathways	Convention Center Room K
12:00-2:00 pm	Luncheon	
2:00-3:30 pm	Resource Room, Conference Session Presenters will be available for small group discussions	San Jose Hilton - San Carlos Room
	* The Science of Alcohol Curriculum for American Indians (SACAI): Its Uses In Schools and Communities Mike Jojola, Isleta Pueblo, Isleta Elementary School Andrea Pokrzywinski, Fond du Lac Ojibwe School	
	* Guidelines for Effective Mathematics and Science Programs Victor Pedro, Pueblo of Laguna, Educational Consultant Abbie Willetto, Navajo, AISES	
	* Grant Writing for Teachers for NSF Funding Don Jones, National Science Foundation Abbie Willetto, Navajo, AISES	
	* Electronic Pathways Connie Buffalo, Mind Extension Institute Karen Buller, Western Interstate Commission for Higher Education	
	* Global School House Laura Craighead, Global School House	
	* Mathematics Activities & Materials for K-12 Florence Fasanelli, Ph.D., Mathematical Association for America Lois Folsom, SUMMA Consultant Scott Pinkham, Nez Perce, AISES	
	* Full Option Science Systems (FOSS) Larry Malone Linda DeLucchi	
	* Technology In The Classroom Misty Brave, Rosebud Lakota, Little Wound School Tony Brave, Oglala Lakota, Oglala Lakota College	
	* The Earth Bridge Project: Developing Leadership Through An Earth-Honoring Dream Dr. Whitney Laughlin, Hawaii Preparatory Academy	
2:00-6:00 pm	Career Fair/Tech Expo	Convention Center
7:00-9:30 pm	Honors Banquet	Convention Center

SATURDAY, NOVEMBER 12

6:30-8:00 am	Continental Breakfast	Convention Center
8:30-9:45 am	Plenary Session	
9:45-11:45 am	Mathematics Activities & Materials for K-12, Florence Fasanelli, Ph.D., Mathematical Association of America, Lois Folsom, Albuquerque Public Schools, Scott Pinkham, Nez Perce, AISES PreCollege Programs Coordinator	Convention Center, Room D
12:00-1:00 pm	Sack Lunch/Round Table Discussion	
1:00-2:30 pm	Seminar: "Student Centered Knowledge Building in Science: Constructivist Approaches To Teaching and Learning," Karen Reynolds, Ph.D., San Jose State University	Convention Center, Room D
2:45-4:15 pm	Seminar: "Considerations for Improving Mathematics and Science Education for Native Students," Sharon Nelson-Barber, Ed.D., Rappahannock; and Elise Trumbull Estrin, Ed.D., Far West Laboratory	Convention Center, Room D
4:15-5:15 pm	Workshop Evaluation/Closing Session	San Jose Hilton - Plaza Room
6:45-8:30 pm	Traditional Dinner	Convention Center
9:00-1:00 am	Traditional Pow Wow	Convention Center

SUNDAY, NOVEMBER 13

8:00-9:30 am	Continental Breakfast	Convention Center
9:30-11:00 am	Closing Ceremony	Convention Center

1994 Annual Conference - Teacher Budget

	Eastman Kodak 3M	Office Of Naval Research
Staff		
Cathy Abeita (Project Director)	\$1,800	
Deena Shaw (Project Assistant)	750	
Ruth Bradford (Instructor-8 days X \$200)		1,600
Clifford Poodry (Instructor-8 days X \$200)	1,600	
Heather Duffy (Instructor-8 days X \$200)		1,600
Staff Subtotal	3,950	3,200
Fringe \$2,550 X 18%	459	
	<u>Total Staff Salaries</u>	<u>7,609</u>
Travel/Accommodations		
Staff Airfare to Workshop - (5 X \$400)	1,200	800
Participant Airfare (20 X \$400)	6,000	2,000
Staff Rooms		
Abeita, Shaw (2 X 7 nts. X \$85)	1,190	
Instructors (3 X 7 nts. X \$85)	595	1,190
Participant Rooms (10 X 5 nts X \$85)	4,250	
	<u>Total Travel/Accommodations</u>	<u>17,225</u>
Meals		
Staff (Abeita, Shaw, Bradford, Poodry, Duffy)		
Sun & Mon - 5 X 2 days X \$35	210	140
Staff & Participants & Guest Speakers		
(Tues - Thurs - 33 X 3 days X \$35)	3,255	210
Staff & Participants		
(Conference registration incl. meals 26 X \$150)	3,600	300
	<u>Total Meals</u>	<u>7,715</u>
Instructional Materials		
Lab Materials/Software/Kits	2,340	2,160
	<u>Total Instructional Material</u>	<u>4,500</u>
Office Supplies		
Printing, Postage, etc.	1,000	
	<u>Total Office Supplies</u>	<u>1,000</u>
TOTAL DIRECT COSTS		38,049
INDIRECT (20%)		<u>7,610</u>
TOTAL		45,659

Signature Date
AISES Coordinator

Signature Date
Person who can commit AISES (supervisor of AISES Coordinator)

ABOUT AISES

The American Indian Science and Engineering Society (AISES) is a private, non-profit organization which nurtures building of community with traditional Native values. Through its educational programs, AISES provides opportunities for American Indians and Alaskan Natives to pursue studies in science, engineering, business and other academic areas. The trained professionals then become technologically informed leaders within the Indian communities. AISES' ultimate goal is to be a catalyst for the advancement of American Indians as they seek to become self-reliant and self determined members of society.

AISES teacher programs serve Pre-K through College mathematics and science teachers from Indian schools and schools with a significant population of Indian students. Teacher programs are conducted nationwide.

EXPECTATIONS

AISES is serious about its commitment to Indian education and has demonstrated this commitment through its investment of time and money in teacher programs and student enrichment. We expect the same commitment from workshop participants. The participants' investment is in the form of hard work, attendance at all workshop activities, and cooperation with other participants.

Application Process

AISES will consider all applications received by September 30, 1994. A complete application includes these three items:

- 1) Application Form
- 2) Attached narrative
- 3) Letter of support from school administrator

Mail all three items to:

AISES/Cathy Abeita
1630 30th Street, Suite 301
Boulder, CO 80301-1014
(Please no faxes)

"Human Biology" for Teachers Grades 4 - 9

Sponsors:
3M Corporation
Eastman Kodak

6th Annual
AISES Teacher Workshop in
Conjunction with the
AISES National Conference
November 7 - 13, 1994

San Jose, CA

ABOUT THE PROGRAM:

The 1994 AISES Environmental Science teacher workshop is sponsored by 3M Corporation and Eastman Kodak.

The sixth annual teacher workshop will be held Monday, November 7 - Sunday, November 13, 1994, in San Jose, CA at the San Jose Hilton.

The workshop will focus on human biology and will model interactive teaching strategies designed for successful classroom learning. Teachers will work in cooperative learning groups and will be involved in hands-on learning. Two semester continuing education credit hours will be provided through the Colorado School of Mines, Golden, Colorado. Applications will be considered from teachers of American Indian students in grades 4 - 9 from the following states: California, Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming.

Program staff will include Ruth Bradford, Heather Duffy, and Dr. Cliff Poodyry.

Travel, room and board, and workshop materials will be provided through the program grants from 3M Corporation, and Eastman Kodak.

For additional workshop information, contact Cathy Abeita at (303) 939-0023.

WORKSHOP AGENDA

MONDAY, NOVEMBER 7

2:00 - 3:00 p.m. Teacher Registration
3:00 - 4:00 p.m. Welcome, Traditional Opening
4:00 - 5:30 p.m. Workshop Introduction
6:00 - 7:00 p.m. Dinner
7:00 - 9:30 p.m. Pre-laboratory Activities

TUESDAY, NOVEMBER 8

7:00 - 8:00 a.m. Continental Breakfast
8:00 - 9:15 a.m. Laboratory Session
9:30 - 5:45 p.m. Hands-On Biology
12:00 - 1:00 p.m. Lunch
6:00 - 7:00 p.m. Dinner
7:00 - 8:30 p.m. Work on Cooperative Learning Group Assignments

WEDNESDAY, NOVEMBER 9

7:00 - 8:00 a.m. Continental Breakfast
8:00 - 9:15 a.m. Marine Biology Introduction
9:30 - 6:00 p.m. Field Trip (Monterey - Aquarium)
6:30 - 7:30 p.m. Dinner
7:30 - 9:00 p.m. Work on Cooperative Learning Group Assignments

THURSDAY, NOVEMBER 10

7:00 - 8:00 a.m. Continental Breakfast
8:00 a.m. Leave for local school site visit
1:00 - 2:00 p.m. Lunch
2:00 - 4:00 p.m. Workshop Debriefing Session
4:00 - 6:00 p.m. Opening Ceremony of AISES Conference
6:00 - 8:00 p.m. Reception
8:30 - 10:30 p.m. To be announced

FRIDAY, NOVEMBER 11

6:30 - 8:00 a.m. Continental Breakfast
8:00 - 9:00 a.m. Concurrent Sessions
9:15 - 10:15 a.m. Concurrent Sessions
10:30 - 11:30 a.m. Concurrent Sessions
12:00 - 2:00 p.m. Luncheon
2:00 - 6:00 p.m. Career Fair/Tech Expo
7:00 - 9:30 p.m. Honor Banquet

SATURDAY, NOVEMBER 12

6:30 - 8:00 a.m. Continental Breakfast
8:30 - 9:45 a.m. Plenary Session
9:45 - 11:45 a.m. Career Fair/Tech Expo
12:00 - 1:00 p.m. Sack Lunch/Round Table Discussion
1:00 - 2:30 p.m. Seminar
2:45 - 4:15 p.m. Seminar
4:15 - 5:15 p.m. Workshop Evaluation/Closing Session
6:45 - 8:30 p.m. Traditional Dinner
9:00 - 1:00 a.m. Traditional Pow Wow

SUNDAY, NOVEMBER 13

8:00 - 9:30 a.m. Continental Breakfast
9:30 - 11:00 a.m. Closing Ceremony

APPLICATION

1994 Teacher Workshop, November 7 - 13

Name: _____

Gender: M/F SS#: _____

Tribal Affiliation/s: _____

Home Address: _____

City: _____ State: _____

Zip Code: _____ Home Phone: () _____

School Name: _____

School Address: _____

City: _____ State: _____

Zip Code: _____ School Phone: () _____

Academic Assignment Level: _____

Schools Attended: H.S. _____

College: _____

Degree/Year/Major: _____

Teaching Experience: Level # of Years

ON A SEPARATE SHEET:

Please respond to the following: why you want to attend workshop; how it will strengthen you; meet your school's curriculum needs; discuss briefly your teaching plans/professional goals; any specialized areas of competency; and include a letter of support from school administrator.



Volume 10, No. 3
Fall 1994/Winter 1995

AISES The American Indian Science & Engineering Society

Education Newsletter

Supported by a Grant from AT&T

High School Day

by Nancy Wallace, Comanche/Creek,
Local Planning Comm. High School Day Chairperson

By 8:00 a.m. on Friday, Nov. 11, 1994, the west entry of the San Jose Convention Center, San Jose, CA., was bustling with activity as approximately 500 American Indian high school students, primarily from the San Francisco Bay area and northern California, awaited the opening session of the 1994 AISES High School Day, held in conjunction with the 16th Annual AISES National Conference.

Following the opening remarks made by myself and Cindy Martine, Apache, AISES Board of Directors treasurer, the students were introduced to the keynote speaker, Benny Shendo, Jemez Pueblo, newly appointed director of the Stanford University Native American Program. Benny shared his personal background and growth with the young audience and passed along a strong message of commitment to goals, confidence in personal abilities, and a challenge to the students to strive to be the best at whatever career path they choose.

After the ceremony, students divided into two groups to attend College Preparatory sessions. Dr. Whitney Laughlin of the Hawaii Preparatory Academy caught the attention of ninth and 10th-graders as she gave a motivating talk about how to overcome obstacles and attend college; while Lance Lujan, Kiowa/Taos Pueblo, of the Indian Resource Development Program and Mary Lukin, Blackfeet, of Montana State Univer-

sity filled the 11th and 12th-grade room with laughter while sharing their college experiences.

Students then attended hands-on sessions conducted by American Indian scientists, engineers, and other professionals throughout the nation. Topics focused on environmental protection, marine biology, American Indian program opportunities, basketry, holograms, computers, career choices, and the Science of Alcohol Curriculum for American Indians. Judging from attendance levels observed in the different sessions, the topics proved to be a success.

Upon completion of High School Day activities, students and their chaperons were invited to join the 2,300 plus mainstream AISES National Conference attendees for a luncheon. Highlights of the luncheon included the recognition of the 1994 AISES Outstanding High School Student and Teacher.

Following the luncheon, the AISES Career Fair and Technology Exposition was opened. Students, along with professionals, were able to meet and receive information from over 190 exhibitors, including major Fortune 500 companies, tribal agencies, government agencies, and colleges and universities across the United States. In addition, technical presentations, hands-on activities, and cultural demonstrations were held in conjunction with the Fair making High School Day an event packed learning experience for all in attendance. ♦

Student Chapter Update Chinle High School, Chinle, AZ

by Ken Sanford, Student Chapter Advisor

We are beginning our trek to Milwaukee to attend the National American Indian Science & Engineering Fair by having Chinle students do their Fair presentations to local supporting organizations, Parent Advisory Committee, and Chinle School Board. We are hoping to take 25 to 30 students from our entire district to the Fair. Students have been given science fair registration forms to complete. I hope we all get a chance to make it to Milwaukee. Hard work, determination, and a little luck will get us there.

I would like to share some Fair fundraising suggestions that we plan to use in Chinle:

- sponsoring a holiday/community Pow Wow
- showing Walt Disney holiday movies at our younger district schools
- providing big brother/sister interaction for the younger students.
- sponsoring a tutoring/mentoring program for grades 4-6. The tutoring program is designed to get children interested in school by focusing on the importance of mathematics and science, as well as other areas of study. ♦

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The AISES Education Newsletter is published quarterly by the American Indian Science & Engineering Society, a private, nonprofit organization which nurtures building of community by bridging science and technology with traditional Native values.

Please direct all inquiries about and information for the AISES Education Newsletter to Cathy Abeita or Laura Kalafus, AISES, 1630 30th Street, Suite 301, Boulder, CO 80301-1014; (303) 939-0023.

A Ceremony of Enlightenment - The AISES Annual National Conference Teacher Workshop

The following article was written by Ferris Paisano III, Nez Perce/Laguna Pueblo, an elementary teacher at Lapwai Elementary School in Lapwai, ID. Ferris was one of 19 educators who attended the six-day teacher workshop, which focused on Human Biology, and was held in conjunction with the AISES National Conference in San Jose, CA.

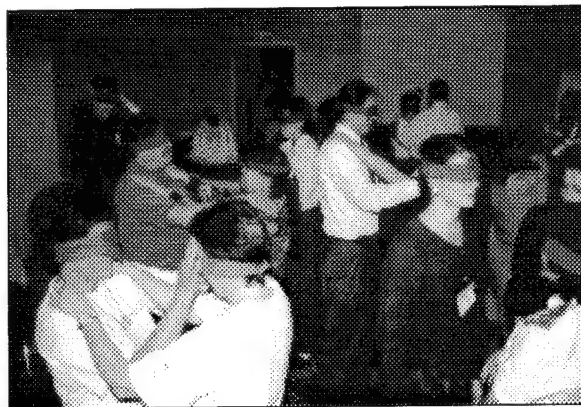
Reflections: The first act was humbling, being selected was the first honor of the ceremony. The door was opened and we were allowed to walk through. We were surrounded by people dedicated to facilitating learning. These are just a few of the many who served us: Ruth Bradford, Turtle Mountain Chippewa; Heather Duffy; Clif Poodry, Ph.D., Seneca; Scott Pinkham, Nez Perce; Cecelia Jacobs; and Cathy Abeita. Each person sacrificed their gifts of knowledge and expertise at the altar of learning, which we gave thanks for at the beginning of each session.

The ceremony began with a purification of purpose, thought, action, and commitment, which was led by Ruth Bradford. We were allowed to cleanse ourselves in a sacred circle to be joined as one in body, mind, and spirit.

Dr. Clif Poodry gave special gifts in the area of "inquiry learning and instruction" which has been taken and put in our teaching bundles to use with the "Holy Ones," our children. Like any ceremony, it sometimes became intense with feelings of love, unity, exhilaration, joy, and wonderment, facilitated through new knowledge and experiences. Clif fought himself and didn't fill us with his knowledge, but allowed us to grow, discover, and learn naturally or unnaturally depending on the individual, through inquiry learning, using our knowledge, and research.

The workshop ended all too quickly. The experience was overflowing from the cups of our hearts. We were all grateful and honored to

have been invited to this sacred learning ceremony. We were blessed by the



"Educators participate in an exercise of trust at the Annual National Conference Teacher Workshop"

bonding, forming, and making of new and lasting relationships.

We were invited to the feast which was to culminate the ceremony. The feast was the AISES Conference.

Breakfast: Norbert S. Hill, Jr., Oneida, AISES Executive Director, welcomed everyone and left us with this gem of truth, "We are honorable people, alcohol does not bring us honor." We pledged abstinence and honor.

Lunch: Doris Leader Charge, Lakota, Sinte Gleska University, and keynote speaker, led us through her spiritual walk with practical feet in a hostile school environment. Her words of truth tore at our hearts and our tears flowed healing us as they hit Mother Earth. We knew her story was the story of our parents, grandparents, and all those that have gone before our story. Her story should be played at all inservices where Indigenous children are taught.

Dinner: The Indian Women's Panel: Henrietta Mann, Northern Cheyenne,

JoAnn Morris, Sault St. Marie, Lee Piper, Cherokee, and Sandra Begay-Campbell, Navajo, all gave opening statements. They were inspirational, informative, honoring, and goals we all should work toward. BUT, Lee gave us direction with a capital "D." She said, "Women, if you don't want your men to beat you, raise your sons right. If you want your daughters to be dignified and honorable, teach them dignity and honor. Men, be responsible to your families; feed, clothe and take care of them! Women, if the men aren't going to be responsible DON'T HAVE THEIR BABIES!" Again, grandmothers educated us giving true direction should we choose to follow their mandates.

Dessert: Dwight Gourneau, Turtle Mountain Chippewa, brought tears of pride, honor, respect, and love to our eyes as he told his story of suffering, sacrifice, success, joy, love, and COMMITMENT. Commitment to himself, wife, family, tribe, nation, learning, and career, was put as a standard to the assembly. He asked his wife to join him as he talked showing us his love for her and life reminding himself and us that it takes support to succeed in life and no one really makes it on their own. His commitment to marriage and life left a lasting impression.

THANK YOU AISES for your special gift to this humble servant. We can never repay you, only through service to all children and continuing to find light, recognize light, and become enlightened and knowledgeable. ✚

AISES Programs & Activities Open Doors for Students

AISES Summer Programs

Summer is right around the corner and the February 15, 1995, deadline for AISES Summer Academic Programs is soon approaching. Last summer over 300 students representing 49 tribes and 21 states attended the hands-on mathematics, science, and engineering programs, which are held at college campuses throughout the country. Please contact the AISES PreCollege Department for applications. The 1995 program schedule is as follows:

- Incoming 8th-graders
 - National Science Foundation M³ Summer Science Camp for Mathematics and Science, St. Norbert College, DePere, WI, July 8-22
 - National Science Foundation Young Scholar's Mathematics Program, St. Norbert College, DePere, WI, June 17-July 2
- Incoming 9th-graders, Physical Sciences Program, New Mexico State Univ., Las Cruces, NM, June 11-July 1
- Incoming 10th-graders
 - Mathematics Program, Montana State University, Bozeman, MT, June 26-July 21
 - Life Sciences Program, Univ. of Iowa, Iowa City, IA, June 18-July 8
 - National Cancer Institute Health Sciences Program, University of Colorado, Boulder, CO, July 1-August 5
- Incoming 10th and 11th-graders, U.S. Department of Education Upward Bound Mathematics/Science Program, University of Colorado, Boulder, CO, June 24-August 5
- Incoming 11th-graders
 - Mathematics Program, Clarkson Univ., Potsdam, NY, July 9-29
 - Computer Science Program, Stanford University, Stanford, CA, June 30-July 29
- Incoming 12th-graders, Mathematics Program, Oklahoma State Univ., Stillwater, OK, June 4-July 1.

National American Indian Science & Engineering Fair

The Eighth Annual National American Indian Science & Engineering Fair will be held March 30-April 1, 1995 at the MECCA Arena in Milwaukee, WI. Please note that the host hotel has been changed to the Ramada Inn Downtown, 633 W. Michigan St., Milwaukee, WI, 53203. Telephone: 414/272-8410.

Last year's Fair drew over 1,100 American Indian students from 13 states and Canada. Six high school students received the Fair's grand prize, an all-expense-paid trip to Birmingham, AL, to compete in the International Science and Engineering Fair, sponsored by Science Service, Inc. Please contact the AISES PreCollege Department for guidelines, registration forms, and other Fair information.

1995 Critical Science Fair Dates are as follows:

January 25 - All participants (grades 5-12) must submit their Research Plan (1A) and Approval Form (1B) to the AISES PreCollege Department. After review, these forms will be mailed back to the participant.

March 16 - Registration form and copy of forms Research Plan (1A) and Approval Form (1B) must be submitted to Concepts Meeting Management (Concepts is handling all Fair registration).

March 30 - Morning Check-In and Set-Up for Grades K-4. Wisconsin Regional Science Fair Critiquing for Grades K-4. After 11 a.m., Check-In and Set-Up for Grades 5-12.

March 31 - National Science Fair Judging for Grades 5-12.

April 1 - National Awards Luncheon

May 7-13 - Science Service's International Science and Engineering Fair, held in Hamilton, Ontario, Canada.

Science Fair Project Resources

Attention parents and educators, are you looking for science fair project topics or are interested in organizing a school or community science fair? Below is a list of science fair resources that may be of interest.

- Science Fair and Projects: Grades K-8 and 7-12.

Offers suggestions for involving students in science projects and guiding parents in their child's investigation. Includes sections on "Planning Ahead," "The What, Why, and How of Projects," "A Fair Evaluation," and "Beyond the Science Fair." Published by the National Science Teachers Association, 1840 Wilson Blvd., Arlington, VA, 22201. Telephone: 703/243-7100.

- Not Just Another Science Fair: A Handbook and More for Science Fair Organizers

Provides a set of resources that discuss how to organize community science fairs and how to do science experiments, and provides organizational materials and charts. Written by Laura Vazquez, David M. France, and Kim M. Perkins.

- How to Prepare a Science Fair Project

Provides teacher and student guides, which include sample forms, sample long-range schedule, ideas for science fair projects, judge score sheet, and certificate of accomplishment. Also includes handy videotape. Published by United Learning, 6633 W. Howard St., Niles, IL, 60648. Telephone: 708/647-0600.

- How to Implement the Science Fair Self-Help Development Program in Schools

Published by David Menicucci, Science Fair Facilitator, Sandia Na-

Continued on page 4

tional Laboratories, Organ. 6216, Albuquerque, NM, 87185. Telephone: 505/844-3077.

Mathematics Competition

AISES and The Mathematical Association of America are pleased to announce as part of the 1995 National American Indian Science & Engineering Fair, a Mathematics Competition, which will be hosted on site at the MECCA Arena. There is no registration fee and competition packets will be made available at Science Fair registration. Participants will divide into teams of two to three students and compete against other teams in their grade division. Mathematics problems, compiled by St. Norbert College's Mathematics Club of DePere, WI, are given to teams to complete. Certificates will be awarded to all participants, as well as special recognition given for outstanding solutions during the Awards Ceremony.

Listed below is a sample problem from each grade level division:

A. Grades 5-6

400 students are riding buses to school, each bus having a capacity of 36 passengers. How many buses are needed?

B. Grades 7-8

A clock loses 2 minutes every 3 hours. How much will the clock lose in a week?

C. Grades 9-10

What is the least common multiple of 9, 42, and 88?

D. Grades 11-12

What is the x-intercept of the line whose equation is $4x + 2y = 12$

(Answers: A. 12 buses, B. 112 minutes, C. 5,544, D. x-intercept = 3)

AISES Summer Academic Programs T-Shirt Design Competition

Feeling creative? The AISES PreCollege Department is sponsoring a t-shirt design contest. The winner's design will be displayed on 1995 AISES Summer Academic Programs t-shirts. He/She will receive a \$25 award.

Maximum of two colors; American Indian design preferred. Deadline is April 1, 1995. Please send entries to: AISES PreCollege Department, 1630 30th St., Suite 301, Boulder, CO, 80301-1014.

Preparatory School Scholarships

The Dr. Rosa Minoka Hill Fund assists in the placement of capable, motivated Indian high school students in some of the nation's outstanding private college preparatory schools. Applications are made each year during the period September through December for entry in the school year beginning the following September. Students should apply during their 8th, 9th, or 10th-grade year. Parents, teachers, counselors, and students having an interest should contact: Dr. Rosa Minoka Hill Fund, 1630 30th St., Suite 301, Boulder, CO, 80301-1014. Telephone: 303/492-3108. ✦

Oneida Nation Builds Unique School

Returning to an ancient tale, the Oneida Nation outside Green Bay, WI, has built an elementary school for 500 students through grade eight that is shaped like the mythical creature responsible for the Earth's creation.

The Iroquois Oneida relate the tale of Earth's creation as follows: The Sky Woman needed a place to land as she plummeted from a hole in the sky. The turtle volunteered to catch her on his shell, so the other animals went to the bottom of the water to drag up earth, which they placed on the turtle's back. And life on Earth began.

The Oneida used money from their flourishing gambling empire - which each year draws three million visitors and \$90 million - to help fund the \$12 million school. Building the new school allowed them to convert the old one into the tribe's first high school, and now the older students can stay on the reservation as they continue their studies.

The new turtle-shaped school reports twice the enrollment of the old school and emphasizes Oneida language and culture.

This article was previously published in NSTA Reports!, Dec. 1994/Jan. 1995. ✦

1995 AISES Calendar

The 1995 AISES Calendar offers 12 exquisite Sam English full-color prints, 10 X 14 print and appointment calendar, as well as selected quotes from historic and present-day tribal leaders. The cost is \$11 each. Discounts are available to orders of six or more. To order, please send check or money order to: AISES Books, 1630 30th St., Suite 301, Boulder, CO, 80301-1014. For additional information, please contact the AISES Book Department.

AISES News

AISES Student Chapter Advisors Meeting

The AISES elementary, middle, and high school student chapter advisors meeting was held in conjunction with the 16th Annual AISES National Conference. Advisors had an opportunity to share ideas, network, and hear success stories about how to motivate students in science and mathematics, and ensure matriculation into college. The meeting was directed by Katie Gilbert of Kirtland Central High School, Kirtland, NM, and Frank Kattnig of Tohatchi High School, Tohatchi, NM.

Ken Sanford, counselor at Chinle High School, Chinle, AZ, attended the meeting. He comments: "I enjoyed the sharing and introductions of all the advisors from the various parts of our nation. I picked up a couple of really good ideas from Katie about the science/mathematics area honor roll. It was also good meeting the counselor from Tohatchi (Frank). It is always nice to hear that other teachers and counselors are going the extra mile for their students!"

AISES National Conference Poster Session

Sixteen American Indian high school students, from throughout the country, proudly displayed their research, in the areas of science, mathematics, and engineering, at the 1994 AISES National Conference Poster Session. Student projects included: "Encouraging Native Americans in Medicine," "Effects of Alcohol on Mice," "Smart Students or Easy Teachers," and "The Effect of Music on Concentration." Project presentation also included a discussion with a professional in the fields of science, mathematics, engineering, and education.

Science Fair Judge Recruitment

AISES is presently recruiting science fair judges for the Eighth Annual National American Indian Science & Engineering Fair to be held in Milwaukee, WI, March 30 - April 1, 1995. The judge(s) play a very important role in the Fair by sharing valuable experience and expertise with the student exhibitors. As a judge, you can coach students on improving projects, ask questions which can contribute to project expansion, and provide students with much needed encouragement. Judges should hold a degree(s) in science, mathematics, or engineering disciplines, **or** equivalent work experience, such as a technician, **or** be currently majoring in science, mathematics, or engineering disciplines. Due to potential conflicts of interest, no elementary, middle, or high school teachers may judge.

AISES Information System (AIS)

The AISES Information System (AIS) is a project being administered by Evans Craig of Sandia National Laboratories and New Mexico Technet. AIS will provide AISES members and employees access to the services on the Internet. This is AISES members' on-ramp to the Information Highway! Each AISES member is allocated 10 hours per month of free network access. Additional hours are available. Plus, certain information is available on a premium rate basis only as identified in the AIS Pricing Schedule. If you would like to have an account set up in your name, and/or for additional information, please contact Evans Craig at 505/889-2321 or fax him at 505/889-2331.

AISES College Guide

AISES proudly announces the publication of its Annual College Guide for American Indians. The Guide contains valuable information for everyone who is concerned with American Indian students and their decisions regarding a college education. There is an extensive data section that is the only one of its kind. AISES has selected 200 schools by unique criteria, including the size of the American Indian community at the school, the specific Indian support programs available, and the number of American Indian graduates. The guide was written solely to motivate more good Indian students to aspire to and apply to college and, to help students pick the right college to maximize their chances of graduation.

For students, there are descriptions of top colleges and why they work for Indians, short articles by Indian students who have been through the college application process, tips on essay writing, and financial aid information. For high school counselors, there are success stories, an extensive bibliography, and a list of summer programs for college preparatory.

The cost is \$5 per Guide. Discounts are available to orders of 10 or more. To order, please send check or money order to: AISES Books, 1630 30th St., Suite 301, Boulder, CO, 80301-1014. For additional information, please contact the AISES Book Department.

AISES New Numbers

AISES has a new telephone number, 303/939-0023, and fax number, 303/939-8150. Please make a note of it. ♦

AISES News for Teachers

M-STEP

The M-STEP is not a version of the two-step. It is a Mathematics-Science Teacher Enhancement Program (M-STEP) funded by the National Science Foundation. Five American Indian communities in Wisconsin and Michigan participate in building a mathematics/science/technology system involving community participation and leadership.

Each of these sites sent representatives to the Annual Conference. Community members and participating teachers were present. The next meeting will be in Escanaba, MI, in Feb. The Annual Conference will be a difficult act to follow but you can do the M-STEP just about anywhere!

We were glad you were there: Lance James, Allyn Cameron, Bea Peters, Tom Peters, Rudy Havarien, Lori King, Connie Hemmila, Diana Ward, Vicki Dowd, Yvette Peguero, Toni Osterberg, Cathy Londo, and Sue Mielcarek.

12 Teachers Attend Conference

Liz Moya, April White, and Rich Sgarlotti, instructors for the Bush Program, met with 12 of the 31 participants who have attended AISES summer workshops in Boulder, CO, over the past two years. Participants and instructors met at the Conference to discuss the applications of the program in teachers' classrooms. They also developed math activities which emphasized cooperative learning and application to real world (local community) problems.

Thanks for joining us in San Jose: Cheryl Burns, John Eklund, Debbie Gatheridge, Elaine Incognito, Beth Neuman, Sharon Pierce, Peggy Poitra, Rose Ann Trottier, Carol Veit, Sherrie Walther, Candi West, and Judith Wilson.



AISES National Conference Educator Sessions

The National Conference had several educator sessions sponsored by the AISES Department of Research and Evaluation. Presenters included representatives from technology organizations, corporations, federal agencies, and universities and schools across the country, including National Science Foundation, Sandia National Laboratories, and the AISES Board of Directors and staff. The sessions were well at-



Teachers from across the nation attended Conference Educator Sessions

tended and included topics such as grant writing, mathematics education, guidelines for effective educational programs, and the Science of Alcohol Curriculum for American Indians.

ASCI Summer Research Fellowship Opportunities

The American Society for Clinical Investigation (ASCI), a non-profit organization of physician-scientists dedicated to furthering excellence in basic and clinical biomedical research, is offering 10 summer fellowships for high school teachers interested in learning more about basic and clinical research. Teachers will gain first-hand experience working on experiments in laboratories and will receive instruction on state-of-the-art scientific techniques. In addition, each teacher-scientist team will work together to develop a proposal that allows the laboratory to provide continuing support for the science education

program at the teacher's high school.

The summer program is expected to last 6 to 8 weeks. Teachers will be paid a \$6,000 taxable stipend for their work. ASCI will also, to the extent possible, support continuing interaction between the laboratory and the teacher. All applications must be received by January 31, 1995. For additional information and/or an application, please contact Ms. Jill Verbin, ASCI Summer Research Fellowships Coordinator, 6900 Grove Road, Thorofare, NJ, 08086-9447. Phone 609/848-1000. Fax 609/848-5274.

NSF Seeks Grant Readers

Don Jones of the National Science Foundation spoke to teachers at the AISES National Conference about writing grants. One suggestion he had was for teachers to volunteer to read grants for NSF. This involves reviewing 10 to 12 grants based on guidelines provided, followed by a trip to Washington to discuss reviews with others. This process allows individuals to see what gets funded and is very useful in learning how to write successful grant proposals. Contact Cecelia Jacobs at AISES and ask for a NSF Reviewer Information Form if you are interested in volunteering.

Want \$1000?

Teachers using the Internet can write a one-page description of how they used Internet in a K-12 mathematics or science program before February 1, 1995. If your description is selected, you will write a longer version of your story for publication in "Tales from the Electronic Frontier" and receive a cash prize of \$1,000.

Apply by e-mail. To receive an application form, send e-mail to: tales-application@wl.edu. Leave the subject header empty and put the words "get application" in the body. Or put the words "get info" in the body if you want more information. Good luck!

Continued on page 7

Curriculum Development—Mathematics Materials for K - 12

The National Council of Teachers of Mathematics' (NCTM) Curriculum and Evaluation Standards for School Mathematics Addenda Series provided the outline for the *Mathematics Materials for K-12* session at the 16th Annual AISES National Conference in San Jose, CA. Over 40 teachers and other interested educators were led through activities by Lois Folsom and Florence Fasanelli of the Mathematical Association of America, and Scott Pinkham of the AISES PreCollege Department. Each activity's objective is to encourage the exploration of geometry by elementary, middle, and high school students.

Lois Folsom utilized a pair of dice, a 5 x 5 tile grid, and various tile patterns for an activity to assess the spatial abilities of elementary students from "Geometry And Spatial Sense." With the use of the materials a game was outlined for the participants. The objective was to cover the grid with the patterns as determined by the role of the dice without overlaps. Using color coordinated tile patterns and teams, rules of the game were modified to challenge participants by restricting placement. Educators eagerly inquired about and discovered

other applications. Geometric shapes, patterns, and area were a just a few mathematical concepts which can be conveyed to elementary students in the activity.

A "Geometry In The Middle Grades" activity, presented by Florence Fasanelli, demonstrated how to lead students to discover how vertices (V), edges (E), angles, and faces (F) of polygons and polyhedrons are related. Beginning with the sum of the interior angles of a triangle equaling 180° , sums of interior angles of polygons with n-sides were found by dividing them into triangles by joining their vertices. It was found that n-sided polygons could be divided into $n-2$ triangles. Moving onto polyhedrons, participants were asked for conjectures about their interior angles. Giving just enough information to raise curiosity and allowing them to construct their own polyhedron, participants were able to discover properties such as Euler's theorem: $V + F = E + 2$. Educators learned how to incorporate hands-on exercises to create an atmosphere of inquiry and discovery in the classroom.

Sierpinski's Triangle, created from the Chaos Game outlined in "Geometry From Multiple Perspectives," was the basis of Scott's presentation for high

school level geometry. Participants tried to predict the outcome of the Chaos Game which involved a cycle of plotting random midpoints within a triangle. No order was evident nor predicted when the game cycled less than fifty times. With the use of a programmable calculator and algebraic formulas, the game was played 100, 500, and 1000 times. Participants were amazed to see order being derived out of chaos. Transformation, reflection, dilation, congruency, and similarity are all evident in the fractal pattern known as Sierpinski's Triangle. The participants eagerly asked what would happen within a square, a hexagon, and other polygons. Would order be evident? Why or why not? These questions were left to be answered and explained as an activity for students.

Hands-on activities and curiosity raising lessons presented at the *Mathematics Materials for K - 12* session provided educators with ideas to take back to their schools. These ideas can make mathematics enjoyable and intriguing to precollege students. It is the hope that along with the interest in mathematics instilled by educators, students' enrollment in mathematics/science courses and grades will increase. ♦

Teacher News Continued from page 6

US Dept of Ed Launches Parent Campaign

U.S. Department of Education Secretary Richard W. Riley has launched a campaign to better involve parents in their children's education. "More sustained attention needs to be paid to that most vital of links: the promise and potential of parents and other family members as the most important teachers of their children," said Riley during a speech in Washington, D.C.

Riley says that 30 years of research

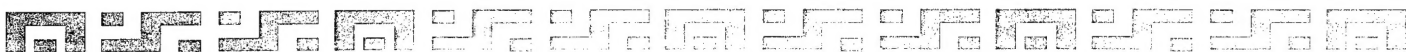
and successful programs using parents reinforce his call for a parent involvement campaign. Schools need to encourage this effort, according to a report released concurrently with the campaign announcement, by creating "an environment in which teachers and staff make parents feel like full partners."

Riley also addressed seven good practices for families to use to promote their children's education: commit your own time to your children's learning; commit yourself to high standards and set high expectations; limit television to a maxi-

mum of two hours a day; read together; make sure your children take tough courses, and set aside regular time to go over their homework; make sure your children go to school every day, and keep them off the streets at night; talk to your children about the dangers of drugs and alcohol.

"Strong Families, Strong Schools," is available free of charge by calling 1-800-USA-LEARN. ♦

This article was previously published in NSTA Reports!, Dec. 1994/Jan. 1995.



Alcoholism—The Medicine Person and the Beast

Adapted from a story by Carolyna Smiley-Marquez, San Juan Pueblo

This is a story about a Beast who visits the people of the tribe, knocking on their doors and wearing an untrue but beautiful face. It speaks with a smooth, musical voice, and covers its own smell with the clean scents of the forest. If the people allow it to enter their homes, the Beast promises to bring peace and happiness to them. At first the Beast is very friendly, and as the house fills with talking and laughter, the family learns to trust it.

As time goes on, the Beast begins to show its true, beastly face. It roars around the house, bumping, pushing, shoving, and knocking family members around. It becomes so crazy it even tears at itself with its own claws, making terrifying noises.

The entire household is upset. The family members do not have time to do other things because they have to take care of the demands of the Beast. It wants the attention of the whole family. Talking and laughter returns from time to time, but not

for long. No one can guess when the Beast will be happy or when it will be angry.

As the Beast gets worse, its true beastly face appears more frequently. Every family member suffers from the Beast's pain. Soon the faces of everyone in the family begin to resemble the face of the Beast. The people's clothing and belongings are ripped apart by the Beast as they flee. Destruction is everywhere! The whole community is suffering from the presence of the Beast.

The Medicine Person of the community knows the Beast and helps the families when they want to get rid of it. But the clever Beast always hides itself in different ways. The Medicine Person decides to meet with the elders to discuss the problem. All agree that few weapons will help fight the Beast. The Medicine Person reminds them that teachings from traditional values and "old ways" of the community can be used to battle the Beast.

All agree that the Beast cannot be

defeated by one person alone, and all their people agree to meet. The Medicine Person shows them the two faces of the Beast. They learn about the power of the "old ways." And by studying the words and ways of their ancestors, they soon gain the wisdom and strength needed to resist the Beast. With fasting and prayers, singing and chanting and drinking only pure water from a spring above the tree line, the people prepare to battle the Beast. Together they are ready to restore their community to harmony and balance. They know that the Beast can reappear again if the people are weak. So, with the wisdom and insight they gained from studying the "old ways," they are ready to fight the Beast. ♦

(reprinted from the AISES Science of Alcohol Curriculum for American Indians, Unit Two - "How Does Alcohol Deprive the Body and Community of Energy?", funded in part by the National Science Foundation)



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FINANCIAL STATUS REPORT

(Long Form)

(Follow instructions on the back)

1. Federal Agency and Organizational Element to Which Report is Submitted Department of the Navy Office of Naval Research	2. Federal Grant or Other Identifying Number Assigned By Federal Agency Grant N00014-95-1-0168	OMB Approval No. 0348-0039	Page 1	of 1 pages
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3. Recipient Organization (Name and complete address, including ZIP code)
American Indian Science and Engineering Society
1630 30th Street, Suite 301
Boulder, CO 80301

4. Employer Identification Number 73-1023474	5. Recipient Account Number or Identifying Number	6. Final Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Basis <input type="checkbox"/> Cash <input type="checkbox"/> Accrual
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8. Funding/Grant Period (See Instructions) From: (Month, Day, Year) 11/1/94	To: (Month, Day, Year) 10/31/95	9. Period Covered by this Report From: (Month, Day, Year) 11/1/94	To: (Month, Day, Year) 10/31/95
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10. Transactions:	I Previously Reported	II This Period	III Cumulative
a. Total outlays			45,659.00
b. Refunds, rebates, etc.			
c. Program income used in accordance with the deduction alternative			
d. Net outlays (Line a, less the sum of lines b and c)			45,659.00

Recipient's share of net outlays, consisting of:

e. Third party (in-kind) contributions			
f. Other Federal awards authorized to be used to match this award			
g. Program income used in accordance with the matching or cost sharing alternative			
h. All other recipient outlays not shown on lines e, f or g			35,659.00
i. Total recipient share of net outlays (Sum of lines e, f, g and h)			35,659.00

j. Federal share of net outlays (line d less line i)			10,000.00
k. Total unliquidated obligations			
l. Recipient's share of unliquidated obligations			
m. Federal share of unliquidated obligations			
n. Total federal funds authorized for this funding period			10,000.00
o. Unobligated balance of federal funds (Line n minus line m)			

Program income, consisting of:

q. Disbursed program income shown on lines c and/or g above			
r. Disbursed program income using the addition alternative			
s. Undisbursed program income			
t. Total program income realized (Sum of lines q, r and s)			

11. Indirect Expense	a. Type of Rate (Place "X" in appropriate box) <input type="checkbox"/> Provisional <input type="checkbox"/> Predetermined <input type="checkbox"/> Final <input checked="" type="checkbox"/> Fixed			
	b. Rate 20%	c. Base 38,049.00	d. Total Amount 7,610.00	e. Federal Share 2,000.00

12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.

13. Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

Typed or Printed Name and Title Norbert S. Hill, Jr. Executive Director	Telephone (Area code, number and extension) (303) 939-0023
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Signature of Authorized Certifying Official <i>[Signature]</i>	Date Report Submitted
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FINANCIAL STATUS REPORT

(Long Form)

Please type or print legibly. The following general instructions explain how to use the form itself. You may need additional information to complete certain items correctly, or to decide whether a specific item is applicable to this award. Usually, such information will be found in the Federal agency's grant regulations or in the terms and conditions of the award (e.g., how to calculate the Federal share, the permissible uses of program income, the value of in-kind contributions, etc.). You may also contact the Federal agency directly.

Item	Entry	Item	Entry
1, 2 and 3.	Self-explanatory.	10b.	Enter any receipts related to outlays reported on the form that are being treated as a reduction of expenditure rather than income, and were not already netted out of the amount shown as outlays on line 10a.
4.	Enter the employer identification number assigned by the U.S. Internal Revenue Service.	10c.	Enter the amount of program income that was used in accordance with the deduction alternative.
5.	Space reserved for an account number or other identifying number assigned by the recipient.	Note:	Program income used in accordance with other alternatives is entered on lines q, r, and s. Recipients reporting on a cash basis should enter the amount of cash income received; on an accrual basis, enter the program income earned. Program income may or may not have been included in an application budget and/or a budget on the award document. If actual income is from a different source or is significantly different in amount, attach an explanation or use the remarks section.
6.	Check <i>yes</i> only if this is the last report for the period shown in item 8.	10d, e, f, g, h, i and j.	Self-explanatory.
7.	Self-explanatory.	10k.	Enter the total amount of unliquidated obligations, including unliquidated obligations to subgrantees and contractors. Unliquidated obligations on a cash basis are obligations incurred, but not yet paid. On an accrual basis, they are obligations incurred, but for which an outlay has not yet been recorded. Do not include any amounts on line 10k that have been included on lines 10a and 10j. On the final report, line 10k must be zero.
8.	Unless you have received other instructions from the awarding agency, enter the beginning and ending dates of the current funding period. If this is a multi-year program, the Federal agency might require cumulative reporting through consecutive funding periods. In that case, enter the beginning and ending dates of the grant period, and in the rest of these instructions, substitute the term "grant period" for "funding period."	10l.	Self-explanatory.
9.	Self-explanatory.	10m.	On the final report, line 10m must also be zero.
10.	The purpose of columns, I, II and III is to show the effect of this reporting period's transactions on cumulative financial status. The amounts entered in column I will normally be the same as those in column III of the previous report in the same funding period. If this is the first or only report of the funding period, leave columns I and II blank. If you need to adjust amounts entered on previous reports, footnote the column I entry on this report and attach an explanation.	10n.	o, p, q, r, s and t. Self-explanatory.
10a.	Enter total gross program outlays. Include disbursements of cash realized as program income if that income will also be shown on lines 10c or 10g. Do not include program income that will be shown on lines 10r or 10s. For reports prepared on a cash basis, outlays are the sum of actual cash disbursements for direct costs for goods and services, the amount of indirect expense charged, the value of in-kind contributions applied, and the amount of cash advances payments made to subrecipients. For reports prepared on an accrual basis, outlays are the sum of actual cash disbursements for direct charges for goods and services, the amount of indirect expense incurred, the value of in-kind contributions applied, and the net increase or decrease in the amounts owed by the recipient for goods and other property received, for services performed by employees, contractors, subgrantees and other payees, and other amounts becoming owed under programs for which no current services or performances are required, such as annuities, insurance claims, and other benefit payments.	11a.	Self-explanatory.
		11b.	Enter the indirect cost rate in effect during the reporting period.
		11c.	Enter the amount of the base against which the rate was applied.
		11d.	Enter the total amount of indirect costs charged during the report period.
		11e.	Enter the Federal share of the amount in 11d.
		Note:	If more than one rate was in effect during the period shown in item 8, attach a schedule showing the bases against which the different rates were applied, the respective rates, the calendar periods they were in effect, amounts of indirect expense charged to the project, and the Federal share of indirect expense charged to the project to date.